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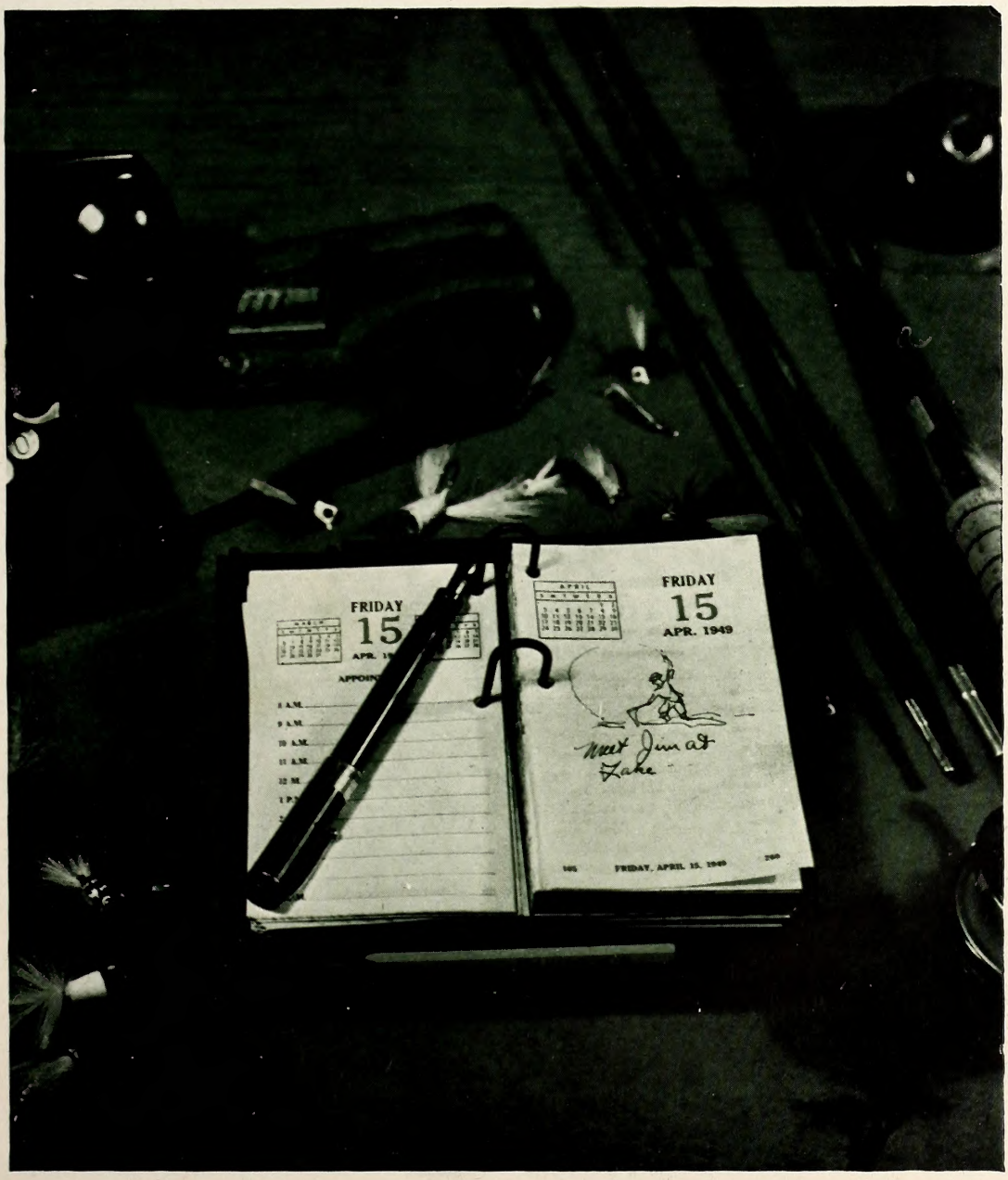
Wildlife

IN NORTH CAROLINA



TEN CENTS APRIL 1949

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This city-bred youngster is holding up the first fish he ever caught. Although it is only a mud-bespattered bullhead, he is as happy as he would be with a record-breaking trout. Why not take a young boy or a girl along with you on that next fishing trip?

"FISHING BOUND"

When the wind has ceased its sweeping
And the sun begins its peeping
At the pretty flowers creeping
Into life—

And the city keeps a throbbing
With its smiles, its sights, its sobbing,
And its busy throngs a bobbing
With its strife;

Then my thoughts begin to wander
To the pastimes that are fonder,
On the foot paths over yonder
By the creek

Where the honey bees are humming
And the bumble bees are bumming
And the summer nearer coming
Every week.

O' the bass and sun fish flopping
And the big grasshoppers hopping
And the dandelions a popping
From the ground;

Then with fishing poles a switching,
I'll be off with muscles twitching
And my fingers just a itching—
Fishing bound.

—C. V. Thornton in the *Pennsylvania Angler*.

WILDLIFE IN NORTH CAROLINA

The Official Publication of The North Carolina Wildlife Resources Commission, Raleigh

A monthly magazine devoted to the protection and restoration of our Wildlife Resources and to the improvement of hunting and fishing in North Carolina

STATE OF NORTH CAROLINA

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April 1949 **Vol. XIII No. 4**

COVER

The story in this month's cover picture is a familiar one to desk-bound anglers who have been awaiting the opening of the trout season on April 15. The desk and the idea for the picture are Artist Win Donat's, and the fishing tackle was loaned by Johnson and Lambe sporting goods store, Raleigh.

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Wildlife in North Carolina recognizes the need for close coöperation between State and Federal conservation agencies and the people who hunt and fish—to bring about a restoration of our renewable resources. The Editor gratefully receives for publication all news items, articles, photographs, and other material dealing with the various activities which combine to make North Carolina a better state for hunting and fishing. Full credit is given for all material published.

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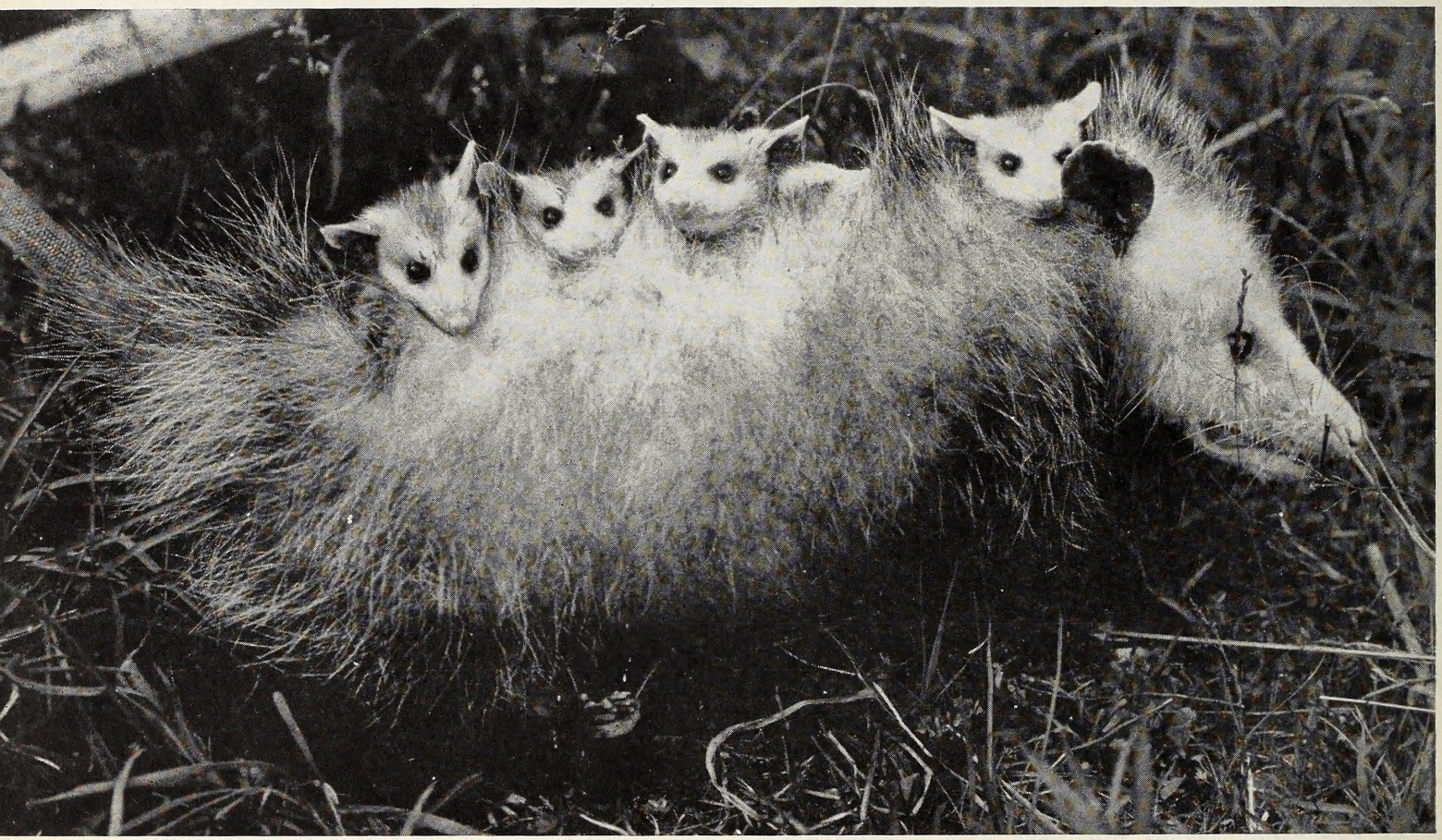
Because WILDLIFE IN NORTH CAROLINA cannot sell advertising, it is impossible to pay for contributions. Nevertheless, a monthly magazine consumes pictures and printed material like a forest fire consumes trees. We are eager to have our readers contribute their share of the material which appears on these pages. If you have an interesting observation on any form of North Carolina wildlife, write it up and send it to us. We need good, lively pictures too, but only in unusual cases can we use pictures which show nothing but dead game and dead fish. Articles from other conservation agencies are always welcome, and so are articles by sportsmen. If you have something you think we can use, send it in.

LET'S LEARN ABOUT OUR WILDLIFE

The Third of a Series on Game Birds and Game Mammals of North Carolina

The Opossum

By Rod Amundson



". . . the opassum hath a head like a swine, a tayle like a rat, as big as a cat, and hath under her belly a bag, wherein she carryeth her young." (U. S. Fish and Wildlife Service Photo by F. M. Blake)

"Hi," said de 'possum, "le's shake dat 'simmon tree—"
"Golly," said de rabbit, "you's shakin' dem on me!"
So dey picked wid dere claws and dey licked dere paws,
And dey tuck a heap home to dere maws.

The above is only one example of the thousands of instances where the opossum appears in the folk lore and music of America. Because of its perculiar habits, and ridiculous appearance, not to mention the toothsome flavor of its flesh, the opossum has been extolled in story and song since the days of the early colonies. Some of the earliest observations made by explorers of the new continent are worth recording here. One of the first Virginians, a man named Purchas, described the opossum thus: "The opassum hath a head like a swine, a tayle like a rat, as big as a cat, and hath under her belly a bag, wherein she carrieth her young." It would be difficult to describe the opossum more vividly in modern English.

Like the names of many of our common animals, the opossum's name comes from the language of the Indians. It is only natural that Europeans, coming to a strange land and finding strange and new animals, accepted and used the names given them by the aboriginal natives. Scientifically, the

opossum is called *Didelphis virginiana.* The word *Didelphis* comes from two Greek words, *di* meaning double, and *delphos* meaning womb. A discussion of the life history of the opossum will show how aptly these two Greek words name the animal. *Virginiana* is a Latin word meaning *from Virginia.* Other Indian names are: *M'possum, Much-woa-pingus, Sing-teshda--tanka, and Shukata.*

Biologically, the opossum is one of the lowest forms of mammals in this country. Because of the abdominal pouch in which females carry their young, it is very closely related to the kangaroo of Australia. Although typically an animal of the Southern states, it has been found as far north as Minnesota and southern Canada. During the past couple of decades the opossum has extended its range far north of its most frequented habitat. A Senator Young of Iowa reported in 1915 that the opossum had come as far north as Des Moines and had first appeared in that State ten years earlier. In 1939 I took a specimen in Dickinson County, Iowa, which lies on the Minnesota border. The event occurred on a night in January during sub-zero weather. Its ears and the tip of its tail had been frozen many times, and much tissue from both ears and the tail was missing. At the time of capture the opossum and I arrived at a straw stack at the same time, both in quest of English sparrows which had burrowed into the straw to keep warm. The animal was subsequently caged and became quite tame. It consumed enormous quantities of sparrows taken from the straw stack on cold winter nights.

Although I had read of opossums since early childhood, the one I encountered at the straw stack was the first I had ever seen. Its first cage was a wooden egg crate, but as the animal grew in length and girth a larger cage became necessary. We were in doubt at first as to what he would eat. We took a hint from the fact that he was hunting for sparrows and fed him plenty of them. Later feedings became a study of the food habits, or at least a study of the vast range of foods the animal would eat; it ate almost anything. It shared table scraps with our Scotch Collie and ate them with the same relish that the dog did. (They did not eat together, however.) It ate a wide variety of fresh and cooked fruits and vegetables, was extremely fond of candy, and once became disgustingly intoxicated on home-made wild grape wine.

Although the animal, which we named "Possum" logically enough, became quite tame, the only member of the household who could handle Possum with impunity was our hired man, Joe. Joe was fresh from Germany, and his English was almost as incomprehensible to me as German. Joe spent hours after work at Possum's cage. He would poke his forefinger into the cage, fascinated when Possum played 'possum. He had a kind of chanting routine worked out. In a high pitched voice he would drone: "Possum-possum-possum-possum - possum - possum" until he was completely out of breath. This never failed to bring Possum back to "life" again, and then Joe would pick him up and handle him about like a tomcat. We nearly had to fire Joe and dispose of Possum when Joe gave Possum a handful of raw red onions to eat. We moved the cage down hill and down wind for a few days after that. Possum ended his days as a feast for an itinerant colored dance band.

Only recently has the reproduction cycle of the opossum been completely understood. Although only one litter of young per year is usual in northern states, two broods are common in the south. As many as eighteen young may be born in a single litter. Litters average between 6 and 7 young. Females have but thirteen teats, however, and this makes thirteen the maximum number of young that may survive in one litter. The gestation period lasts only about twelve and one half days, and the young are so tiny at birth that a tablespoon would hold a litter of eighteen. Young opossums are born in an extremely embryonic state, being completely hairless, blind, and almost entirely helpless. During the birth period the female creates a saliva-moistened pathway to the opening of the abdominal pouch. The young make their way along this skidway into the pouch and seize the first teat encountered. Their mouths are extremely underdeveloped, being at best a small round opening at the front of the head. Once a teat has been grasped, the youngster clings to it until it has reached sufficient growth to enable it to leave the pouch and explore the small world of its mother's long fur. The young remain with the mother until they are weaned and are too large to go back into their living abode. A mother opossum with a dozen small passengers riding on her back is a sight to see.

Animal literature is spiced with pictures of mother opossums holding their tails up over their backs with several offsprings hanging from their parent's tail with their own tails wrapped around it. Such pictures appear so frequently that there is little doubt that such activity does occur. It is well known that young opossums do ride around on their mother's back, using their monkey-like feet to hang on to the long fur.

Something should be said about the business of

SOME IMPORTANT ITEMS IN THE OPOSSUM'S DIET

Worms	Snakes
Grubs	Frogs
Grasshoppers	Corn
Grasshopper's eggs	Fruits
Crickets	Berries
Cricket's eggs	Nuts
Beetles	Birds
Lizards	Eggs

"playing 'possum." With the approach of danger, the opossum puts on an act which has saved the life of many a specimen. The opossum falls over on its side or back, closes its eyes or rolls them back toward the skull, opens its mouth in a gasping attitude, shows its 50 teeth like a model for a toothpaste ad, and lets its tongue dangle out of the jaws. Only seasoned 'possum hunters and 'possum dogs fail to be fooled by this little by-play. Many a 'possum hunter has laid his obviously expired quarry on the ground to turn back a moment later to find it very much alive and absent.

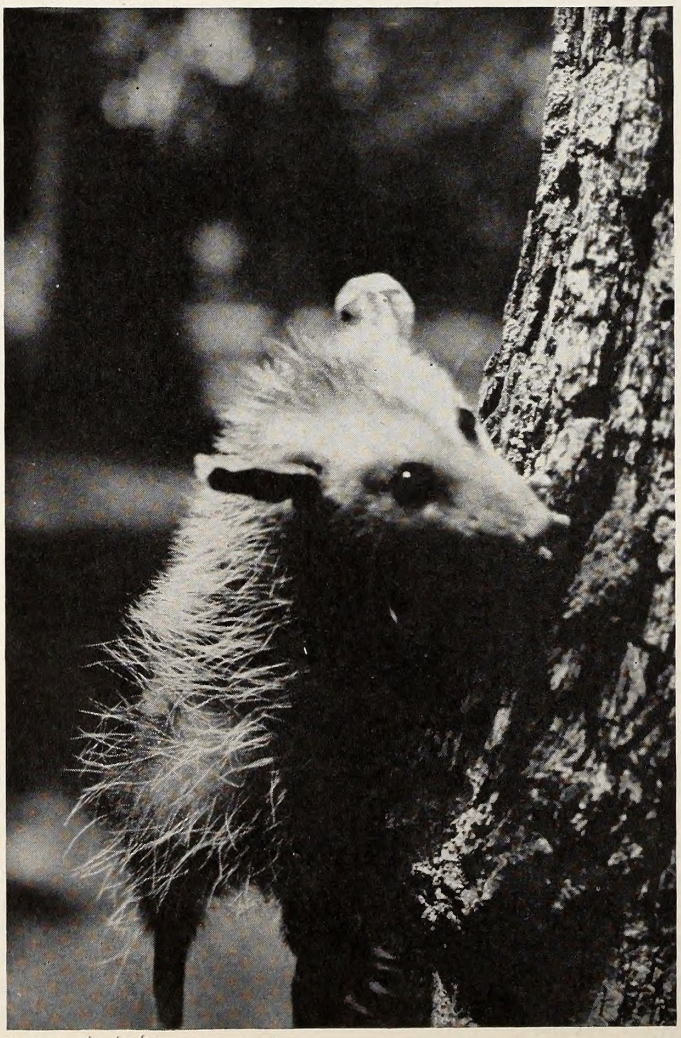
Conscientious observers have found that during the "dead dog" act, the opossum's heartbeat and breathing come almost to a standstill as though it were actually in a state of coma. The ability of the opossum to sense the passing of danger and scurry away makes the possibility of actual fainting or coma very unlikely.

Although the opossum has many natural enemies, man is by far its most oppressive foe. Undoubtedly the clearing of woodlands has had an appreciable effect on opossum populations as compared with their original state, but the usefulness of its fur has let the opossum in for wholesale killing. The flesh is considered toothsome by many people, particularly in southern states, and this fact adds to the toll. Although opossum furs bring a very low market price during periods of fur industry depression, the ease with which opossums may be taken sends countless thousands of furs to the market over the country each year. The guard hairs of the fur are coarse and wiry, but when the pelts are plucked a soft and fairly durable underpelage is exposed. Tons of opossum furs have been shipped to European markets where they were converted to fur trim on inexpensive coats for women. The recent war and current economic distress in Europe has all but destroyed the European market.

The opossum is one of the several North Carolina animals which come under the category of both game and furbearing animals. Opossum hunting is not considered to be especially high class sport, but every country boy and his dog know the fun of scrambling through the woods at night in pursuit of 'possums. There is no special breed of opossum dog in use. Nearly any ordinary mutt of mixed ancestory can be persuaded to become a passable opossum hound. He needs only to pick up the scent, follow it to the animal, drive the latter up a tree and bark at it until his master arrives. Guns are unnecessary. The opossum is anything but an acrobat, although his feet are adapted to tree climbing. Usually he will reach a level of the branches he considers safe and sit more or less calmly until he has been shaken to the ground or dislodged with clubs and stones. A .22 caliber rifle is a convenient means of dislodging the animal and dispatching it at the same time.

Besides men and dogs, the opossum is oppressed by a number of predatory birds and animals. Red and gray foxes include the opossum in their diet, and mink and weasels kill small specimens. The larger birds of prey, such as eagles, hawks, and horned owls, take advantage of the opossum as a source of food, and the species is subject to the usual run of diseases and parasites.

There is little apparent need for an active program of game management for the benefit of the opossum in North Carolina. Land use practices which benefit other small game benefit the opossum. The animal is extremely prolific, and can adapt itself to a wide variety of living conditions. It is equally at home on the ground or in trees, and for a home will use anything from an abandoned woodchuck den to a hollow tree or a crevice in the rocks. The nest is a somewhat indifferent affair, usually made of twigs and leaves haphazardly scraped together.



The opossum is described as stupid, dumb, awkward, clumsy, and ridiculous. Nevertheless, it is an interesting animal neighbor, and certainly a valuable one. Despite the ravages of hunters, trappers, predators, disease, and parasites, the opossum, because of its prolificacy and wide selection of food and living quarters, remains an important source of sports, food, and wearing apparel.

WILDLIFE CLUB MEETS, PLANS BEAGLE TRIALS

The Polk County Wildlife Club at its quarterly meeting at Mill Spring school Thusday evening, adopted the suggestion that the club sponsor annual beagle trials in the county.

J. W. "Dick" Taylor, club president, appointed Arthur Pack chairman of the committee comprised of Claude Ballenger, J. J. Pittman, Hoyt Gosnell and Pack to make tentative plans for the beagle trials and report to the club at its annual spring field day and supper meeting in May.

W. A. Burgess and Dr. John Z. Preston were added to the club's sports park committee of which Carl O. Story is chairman.

Minter Barber was elected to succeed Robert McFarland as secretary.

W. W. Hull, zone conservationist of the Soil Conservation Service regional office in Spartanburg gave an interesting explanation of how soil conservation and wildlife management were closely interrelated, after which he held an informal open forum, discussing some of the problems of fish pond construction and management, and the planting of border strips.

At the end of his talk he was asked what sportsmen in other areas thought of bicolor lespedeza as a quail food. His reply was that in some sections of South Carolina, the dog trainers were complaining that the dogs soon began hunting bicolor patches instead of quail—so sure were they of finding a covey of birds nearby.

THE 14TH N.A. WILDLIFE CONFERENCE

By Mr. Roland McClamroch, *President*
North Carolina Wildlife Federation, Inc.

To attend the annual meeting of the National Wildlife Federation and The North American Wildlife Conference is an experience any conservationist would relish. To attend these meetings for the first time, as was my case, is the most startling and revealing experience. One speaker said, "Conservation is the most popular subject today." The success of these meetings substantiates that. The difference one felt in Washington was that something was being done about conservation in addition to talking about it.

The first day's session of the National Wildlife Federation was concerned with business of the organization. The most important item, which was settled only after several hours of discussion, dealt with proposed amendments to the by-laws. The controversial change evolved around the number of directors. As adopted the number was changed from 23 to 17. The election of officers resulted in President Aylward's re-election and our own Ross Stevens being put upon the board of directors. Ross represents the district composed of North and South Carolina, Virginia and West Virginia.

A resolution proposed by me dealing with the disregard of state hunting regulations by military and naval personnel on government reservations was adopted unanimously, not just for North Carolina as proposed, but for every state.

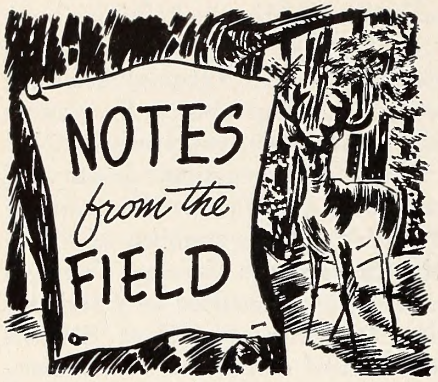
Following this day of butting heads with each other it was reassuring to see that all differences had dissipated by the time of the annual dinner. It was a wonderful dinner—much singing and no speaker. To stifle any suspicion that your chronicler was not there and duly seated, he bought an official picture, which may be seen at the Federation office by anyone remotely interested.

The morning session of the second day was taken up with the presentation of four excellent papers, followed by general discussions. The titles of these indicate their pertinancy: *Uniting Sportsmen in a State-wide Organization, The Public Domain Controversary Still Rages, Coöperation Between the State Federation and the National Headquarters,* and *The Dingle Bill and Other Legislation.* That afternoon, which was a beautiful North Carolina day in Washington, we all visited the Patuxent Wildlife Refuge. Here we were hospitably shown through the laboratories and over the reservation.

Thirty-two state organizations were represented at the National Wildlife Federation meeting. Only three failed to get there. I believe two of those three were southern states.

Monday at 9:00 a.m. the 14th North American Wildlife Conference got underway for three full days of discussion about every conceivable subject relating to wildlife and conservation. You think I exaggerate? How about this? *Economic Utilization of Wildlife Through Partial or Complete Domestication* by Vilhjalmur Stefansson. Incidentally, this was a most interesting paper.

During the three days fifty-four papers were given and three panel discussions were held at which there were three or four papers. No, I didn't attend all of them. But again I made the banquet, at which there were over 1,000 people. From the point-of-view of attendance this was the most successful North American Wildlife Conference. From the point-of-view of interest, stimulating and enlightening, it was for me completely successful. Conservation is news; it is the people's business.



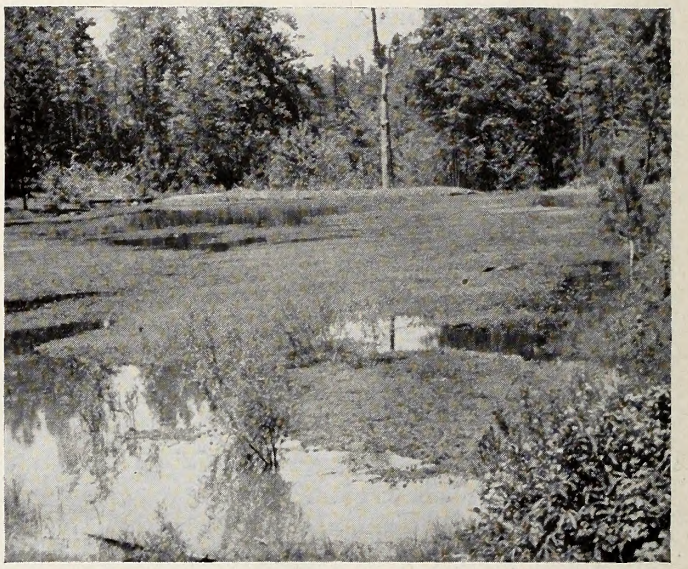
CONTROLLING PARROT'S FEATHER

2-4 D Kills Water Weeds As Well As Dandelions

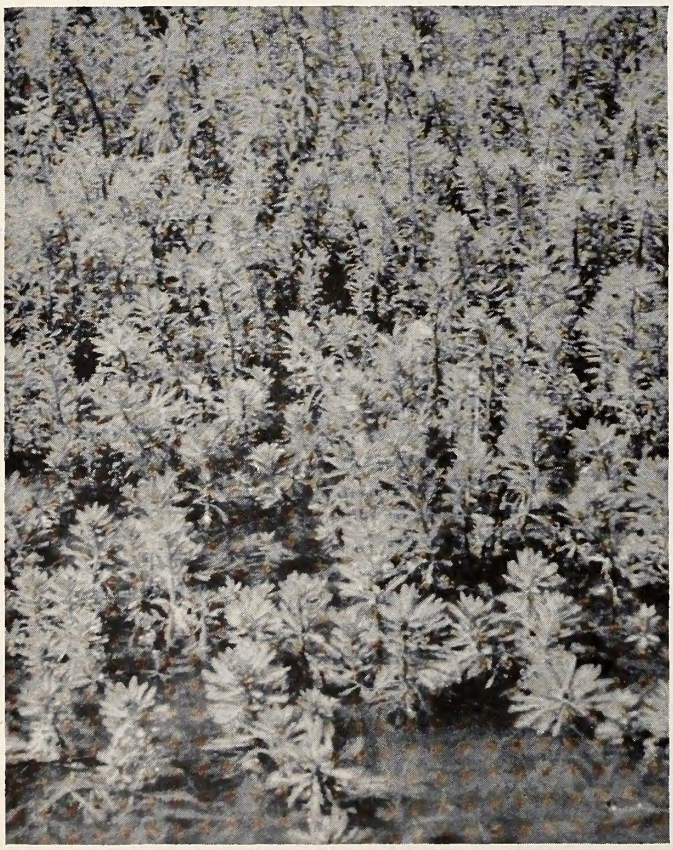
By Jack Dermid
Photos by the Author

Troubled with water weeds in your farm fishpond? If it's Parrot's Feather that is choking up the shallow areas, then your worries may be over. Preliminary experiments conducted by Dr. L. A. Whitford, Associate Professor of Botany at North Carolina State College, indicate that Parrot's Feather can be effectively killed and controlled with 2-4 D weed killers.

Parrot's Feather, known to botanists as *Myriophyllum brasiliense*, is an emergent flowering plant with finely divided leaves. It can be separated from closely related species, for its emersed leaves are nearly like the submerged ones. Introduced from South America, the plant has escaped in many localities in the South, often creating a serious problem for the pond owner. Parrot's Feather grows readily in water up to about four feet deep, and spreads with remarkable speed over large areas. It is believed that birds are important agents in transporting the plant from pond to pond. Apparently seeds are carried in the mud adhering to the bird's feet and in their feathers.



Ray's pond before spraying with 2-4 D. Parrot's feather was so dense it was almost impossible to fish or row a boat.

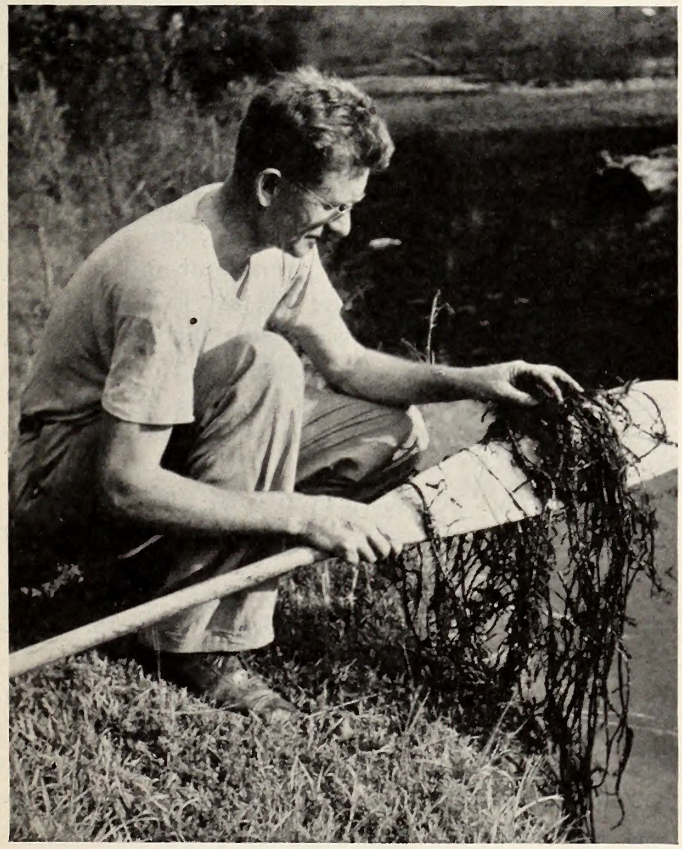


Parrot's feather forms a dense mat of vegetation both above and below surface of the water. Note the finely divided leaves.

Dr. Whitford has found that most standard 2-4 D weed killers are equally effective in destroying this aquatic pest. Stantox P-44, Weedone 48, Weed-no-more, and Esteron 44 are typical of the trade names of the various manufacturers. In preparing the spray used for Parrot's Feather, one ounce of the commercial preparation is diluted with one gallon of water. This is sprayed directly on the plant, and approximately twelve gallons of the diluted spray are required to cover an acre. Properly applied at the right time of year, the spray will give nearly a 100 per cent kill.

As the result of his experiments on the pond of E. G. Ray, Route 6, Raleigh, Dr. Whitford had

devised a procedure for the control of Parrot's Feather that he believes will give lasting results. The 2-4 D is applied when most of the underwater shoots have emerged, usually after the first of June. Before spraying, it is advisable to lower the water level of the pond about two feet, since submerged shoots are not affected by the chemical. And if a boat is used in the operation, spraying should be done from the stern to prevent pushing areas of Parrot's Feather that have already been sprayed below the surface and washing off the 2-4 D. After the treatment, it is recommended that the pond be fertilized for at least the next two years to insure a 100 per cent kill, for it is probable that a few shoots were missed during the application. Plankton organisms will increase their numbers many times as a result of the fertilization, causing the water



Dr. Whitford examines dead and decaying underwater shoots several weeks after application of 2-4 D.

to become cloudy. This not only shades out remaining plants, but it indirectly increases the food supply of the pond's fish. Of course, it will be necessary to make local applications of the weed killer from time to time along the pond edge to kill any newly established plants that may appear.

2-4 D is a plant hormone that speeds up respiration and growth to such a considerable extent that the Parrot's Feather probably uses up its food supply faster than it is made. The plant grows itself to death. After the 2-4 D is applied, noticeable twisting of the Parrot's Feather occurs within several hours. The emergent tips of the plant begin to die

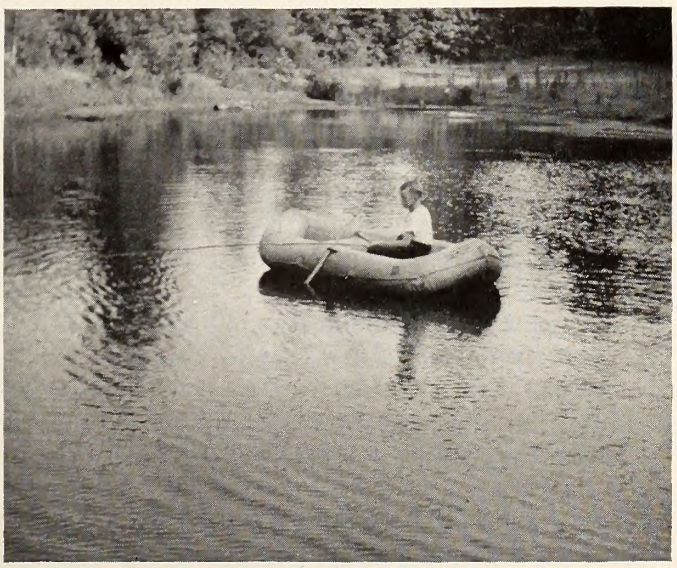
Two months after 2-4 D application, the pond was nearly cleared of parrot's feather. Decaying masses are visible in foreground shoreline.

in about a week, and the entire plant, including the roots, dies in three to four weeks. It is significant to note that with the concentration used the hormone has no effect upon animal life.

Dr. Whitford has found that a five per cent 2-4 D dust is just effective as the liquid spray. The choice depends upon the pond owner's preference. It is better, however, to apply the dust in the early morning of a still day while the plants are moist. In either case, it is necessary to take certain precautions to prevent damage to field crops, especially to beans and cotton. Wind could easily carry the hormone to nearby fields. And if the spray gun and mixing container are ever used for other purposes they must be thoroughly cleaned, and should finally be rinsed with household ammonia.

Certain other aquatic and marsh plants, such as lizard's tail, can be controlled with 2-4 D weed killers;

(Continued on page fourteen)



Now cleared of parrot's feather, Ray's pond is once again the scene of healthful sport and recreation.

THE HEAT IS ON

An Editorial

Somewhere in the neighborhood of half a million hunters and fishermen are going out to the woods and waters of North Carolina during 1949 with the intention of bringing home a bountiful take of game and fish. The kill and catch will be enormous, but when the harvestable supply of wildlife has been divided up among this army of nimrods and anglers, someone is going to be disappointed—and you know who.

Using only the figures on fishing and hunting license sales over the past ten years as a guide, it becomes pretty obvious that the heat is really turned on. Year after year the army of hunters and anglers grows. That is bad enough in itself as far as wildlife populations are concerned. But let's look at the rest of the picture. While the number of sportsmen grows the habitat for fish and game shrinks.

Every new road, every bit of expansion of cities and towns, every new lumber mill, and every forest fire removes just a little more wildlife habitat. Somewhere, sometime, these two opposing factors are going to clash. The result will be either a rude and sudden awakening on the part of sportsmen or an important resource so depleted that hunting and fishing as we know and practice them now will have ceased to exist.

The man who plunks down four dollars and ten cents for a license to hunt and fish is justified in expecting at least a partial return on his investment in the form of take-home game and fish and of good healthy sport. In a sense, by paying his fee he has relieved his responsibility to the State and to fellow sportsmen (as long as he pursues the sport according to the rules). He feels justified in his belief that the money he has spent will assure him of an adeuate supply of fish and game. The whole idea is that money poured into one end of a mechanism will somehow result in bass, trout, rabbits, and deer pouring out the other. A very fine idea—if it would work. Let's look at it from a little wider point of view.

North Carolina's total area is 52,712 square miles, with an average of 68.1 persons per square mile. A recent census gives the total population of 3,571,623 people. About one-seventh of these people hunt and fish some time during each year. Now, let's see how much territory is available for hunting and fishing. There are a total of 3,630 cities, towns, and villages which take up a lot of space that is not available to wildlife (no puns, please). Thousands of miles of roads and highways detract from the total habitat. New buildings, new roads, new industries, and other factors, reduce the remainder of habitat each year. Meanwhile the human population grows and the number of hunters and fishermen taking to the woods and waters increases at a higher relative rate.

Now, let's look at the "mechanism" which has money poured in one end, and which, theoretically, is supposed to give forth fish and game at the other end. The Wildlife Resources Commission employs less than 200 full-time workers. It doesn't seem that an organization of less than 200 people can possibly constitute a mechanism which will provide hunting and fishing to an imposing army of 500,000 hunters and anglers. It would be very nice if they could, but things just do not operate that way.

So how is the fish and game to be produced? Left entirely alone, Nature would produce a certain amount of fish and game. But even with the most ideal system of protection and controlled harvest this situation could not possibly provide even a minimum of recreation. The "mechanism" can and does convert dollars into fish in six fish hatcheries. Other dollars could be converted into game birds and animals, but such practices have been discarded as economically unsound. Quail, for example, can be stocked by the thousands but putting quail out on land which does not provide a suitable habitat is like pouring water into a bucket that is already filled to the brim. The overflow is wasted. The same goes for other game species. It begins to appear that the less-than-200 people are going to need help, and lots of it. The question is: who and how?

The obvious people to help with the job of providing harvestable game and fish are the sportsmen themselves. But the responsibility is not theirs alone. The State of North Carolina is richer each year by nearly one hundred million dollars because people go hunting and fishing. This wealth comes not only from the sale of guns, ammunition, and tackle used by the hunters and anglers, but from the meals they buy, the clothing and supplementary equipment they buy, the money they spend for lodging, guides, dogs, boats, and boots. Gasoline, tires, and automobile depreciation can be included too. It begins to appear that chambers of commerce, manufacturers' organizations, and retail sporting goods dealers are concerned in the matter, too. Manufacturers and retailers stand to lose a lot of money if fish and game become so scarce that half a million people go on picnics instead of fishing and hunting trips.

Most of the wildlife in this State is produced on agricultural land. That fact brings farmers into the discussion. For years game managers and sportsmen have been making demands of farmers to "do more to help wildlife." That is all very well as far as it goes. But farmers have not been keenly receptive to the idea, mostly because any efforts they have made have been rewarded by an army of hunters and

(Continued on page fourteen)

NORTH CAROLINA WILDLIFE

RESOURCE-O-GRAM

A ROUNDUP OF THE LATEST WILDLIFE NEWS

BY APRIL FIRST ALL THAT REMAINED OF THE MORE THAN 65,000 CANADA GEESE WHICH HAD WINTERED OVER AT LAKE MATTAMUSKEET WERE A FEW CRIPPLES RECUPERATING FROM GUNSHOT WOUNDS SUFFERED DURING LAST FALL'S HUNTING SEASON. THE REST HAD GONE NORTH TO THEIR SUMMER NESTING GROUNDS. GEESE HAVE APPARENTLY BEEN ON THE INCREASE DURING THE PAST TWO YEARS, AND A FAVORABLE NESTING SEASON THIS YEAR MAY MEAN A MORE LIBERAL BAG LIMIT NEXT FALL IN THE ATLANTIC FLYWAY.

THE GEORGIA HOUSE OF REPRESENTATIVES HAS APPROVED SEVERAL WILDLIFE BILLS, ONE OF WHICH PROHIBITS THE USE OF LIGHTS FOR DEER HUNTING AND MAKES POSSIBLE THE CONFISCATION OF AUTOMOBILES USED IN TRANSPORTING ILLEGALLY-TAKEN DEER. OTHER MEASURES ESTABLISH A FEE OF $10.25 FOR A 10-DAY NON-RESIDENT HUNTING LICENSE; RAISE THE COST OF OUT-OF-STATE FULL-TERM HUNTING LICENSES FROM $12.50 TO $20.50 (STATE-WIDE) AND COUNTY NON-RESIDENT HUNTING LICENSES FROM $5.50 TO $10.50.

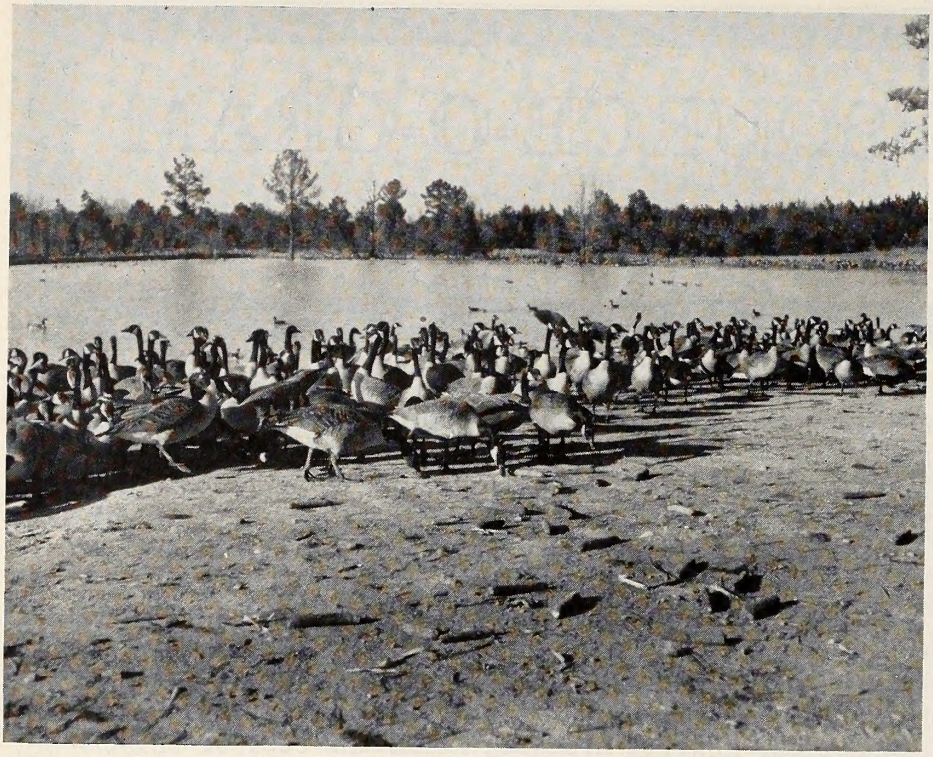
THE 14TH NORTH AMERICAN WILDLIFE CONFERENCE HELD IN WASHINGTON, D. C. EARLY IN MARCH WAS THE MOST SUCCESSFUL EVER FROM THE STANDPOINT OF ATTENDANCE AND SUBJECT MATTER. ATTENDANCE RECORDS EXCEEDED THAT OF THE FIRST CONFERENCE CALLED BY THE LATE PRESIDENT FRANKLIN D. ROOSEVELT IN 1934. NORTH CAROLINA FISH AND GAME WORKERS ATTENDED THE THREE-DAY EVENT.

ALTHOUGH THE WILDLIFE RESOURCES COMMISSION'S GAME HABITAT PLANTING PROGRAM HAS BEEN INHIBITED BY A SHORTAGE OF SEEDS AND NURSERY STOCK, PLANTING OPERATIONS ARE IN FULL SWING, WITH AVAILABLE STOCK BEING DISTRIBUTED AS WIDELY AS POSSIBLE. MULTIFLORA ROSE, WHICH HAS HAD AN IMPORTANT BEARING ON GAME MANAGEMENT IN THE MIDWEST, IS BEING PLANTED IN THE TARHEEL STATE IN QUANTITY FOR THE FIRST TIME. IF THE PLANT PROVES SUCCESSFUL, THE COMMISSION WILL SET UP ITS OWN NURSERY TO INSURE A SUPPLY OF SEEDLINGS.

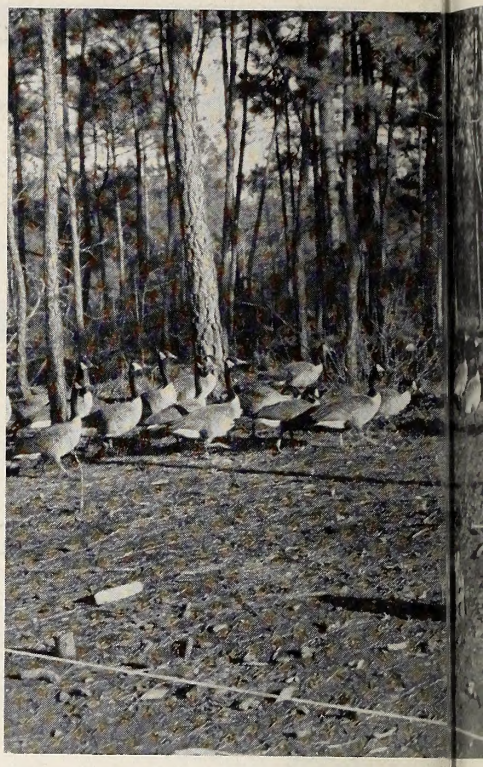
THE WILDLIFE COMMISSION'S EDUCATION DIVISION HAS ADDED A NEW FILM TO ITS GROWING LIBRARY. THE FILM IS A 10-MINUTE SOUND-COLOR PRODUCTION ENTITLED "TROUT FACTORY" WHICH DEPICTS THE TECHNIQUE OF PRODUCING TROUT IN HATCHERIES. THE FILM MAY BE BOOKED BY APPLYING TO THE COMMISSION AT LEAST TWO WEEKS IN ADVANCE. THE MOST POPULAR AND EDUCATIONAL FILM IN THE COMMISSION'S LIBRARY IS "THE REALM OF THE WILD"—SO POPULAR THAT AN ADDITIONAL COPY HAS BEEN ORDERED TO SPEED UP DISTRIBUTION.

THE STATE'S RAINBOW TROUT RECORD HAS BEEN BLOWN SKY HIGH. THE FORMER RECORD OF SEVEN POUNDS PLUS HAS BEEN SUPERCEEDED BY A FOURTEEN POUND-ONE OUNCE GIANT TAKEN BY MAX ROGERS OF WAYNESVILLE WHO FISHED IN GLENVILLE LAKE IN JACKSON WITH A FIVE FOOT CASTING ROD AND A BLACK MINNOW LURE. THE FISH MEASURED 33½ INCHES, AND IS UNDOUBTEDLY THE LARGEST RAINBOW EVER TAKEN ON THE EASTERN CONTINENTAL SLOPE. ALTHOUGH TAKEN PRIOR TO THE OPENING OF THE TROUT SEASON APRIL 15, ROGERS' CATCH IS LEGAL UNDER A COMMISSION RULING WHICH ALLOWS TROUT TO BE TAKEN FROM IMPOUNDED WATERS THROUGHOUT THE YEAR. ALTHOUGH GLENVILLE LAKE IS NOW ESSENTIALLY A WARM WATER SPECIES IMPOUNDMENT, THE WILDLIFE RESOURCES COMMISSION HAS STOCKED THOUSANDS OF TROUT IN IT IN PAST YEARS.

PERSONS INTERESTED IN THE RECENT SURVEY OF THE BAY LAKES MAY SECURE A REPRINT OF A SERIES OF ARTICLES ON THE LAKES WHICH APPEARED IN "WILDLIFE" LAST SUMMER AND FALL BY WRITING TO THE EDITOR OF THIS MAGAZINE.



When live decoys became illegal 14 years ago, Lockhart Gaddy, of Ansonville, released his geese in a small pond on his farm . . .



. . . where they in turn attracted wild birds in
Fed on corn at Gaddy's exper the

. . . which have not become as tame as these regular annual visitors who, although wary of the camera, come close for a handout of corn.

GE
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These Birds Ha
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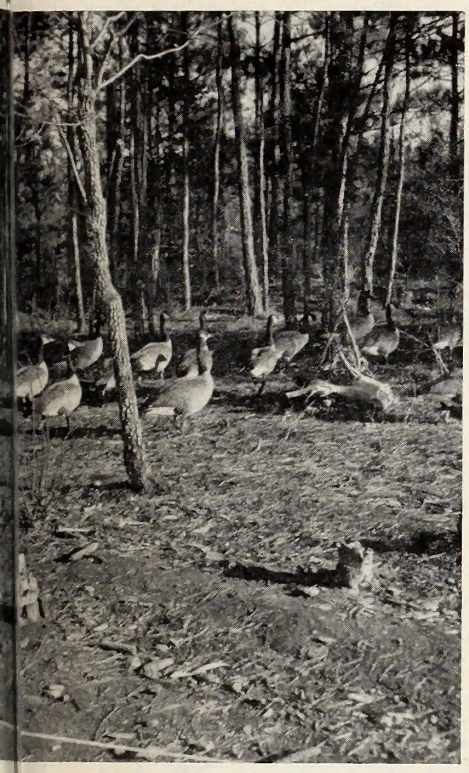


rds in increasing numbers each year. the birds became tame . . .

. . . and now attract thousands of visitors each winter to Gaddy's pond. Birds in background are newcomers . . .

ESE at DDY'S ND

Have Gone r Summer Grounds In da

They Received Means That Birds Can Be This Summer

In late winter the birds become restless, and in early spring they begin their annual spring migration to nesting grounds. About 5,000 spent the winter at Gaddy's pond.

THE HEAT IS ON

(Continued from page ten)

fishermen swarming through their fields, damaging gates, fences, crops, and livestock. Farmers like to see game birds and animals around their farms. Many of them like to fish and hunt. But they cannot be expected to produce wildlife willingly until they have reason to believe that their efforts are appreciated. Many habitat improvements which can be carried out on the farm require an expenditure of money and energy. Farmers should not be asked to bear the burden alone.

It is doubtful that so much as one per cent of hunters and fishermen are deeply enough concerned with our wildlife situation to do anything concrete about it. The other 99 per cent expect to hunt and fish year after year without doing anything more than paying a license fee for the privilege of doing it. No one knows how many don't even buy a license.

We have pointed out who is responsible for helping with the tremendous task of wildlife management. Let's give some thought to how it can be done. Money is a prime consideration. Business organizations which depend on hunting and fishing for a large part of their income should be the first to go along with a game and fish management program out of sheer self-preservation. Business men who don't have time to get out with an axe and shovel to plant wildlife cover and build stream improvement dams can at least provide funds to buy materials and hire others to do it.

Sportsmen, acting individually, can do very little to improve conditions. But collectively, through organization, they can carry on improvement projects in their own communities, which, on a state-wide basis, would accomplish wonders.

There is little more that can be asked of farmers. If they are given the respect and consideration due them, they will be willing to coöperate in habitat improvement projects. But they must not be asked to foot the bill alone, and they must be given something more soul-satisfying than the mental anguish of seeing careless and uninvited hunters and fishermen making themselves at home on their land.

North Carolina, on a comparative basis, now has one of the finest wildlife management programs in the entire country. But the best program possible cannot succeed without public support behind it. Business men and sportsmen must become convinced that unless they get in and push along with a good wildlife program they stand to lose both dollars and sport.

Public opinion, in America, is one of the most powerful forces in the world. Applied to this state, public opinion can make or break an intelligent game program. Real sportsmen appreciate that game and fish law violators are public enemies, and have enough fortitude to help keep violations at a minimum by performing their duties as citizens in reporting violations.

Perhaps it is too late to convince all of the present generation that wildlife on the land and in the streams must be considered the property of all the people until it is reduced to possession. There are still thousands of people who believe that wildlife was placed on the land by the Almighty Providence for their own personal unrestricted use.

Our schools are filled with youngsters who will be the sportsmen and sportswomen of the future. It is up to the people who appreciate the value of our wildlife today to make certain that these young citizens will grow up in an appreciation and knowledge of the value of our wildlife resources.

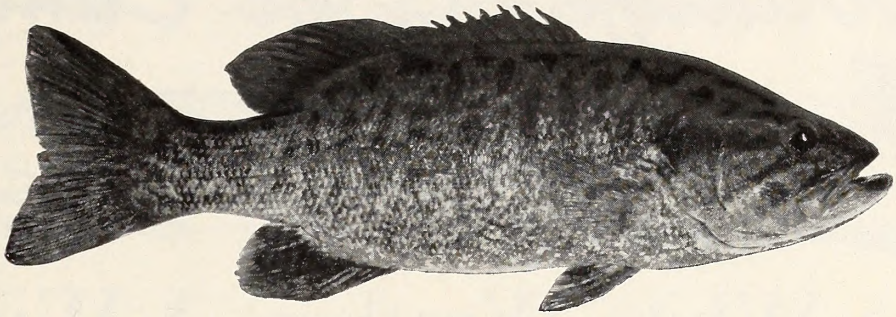
The heat is on. Unless we meet squarely and quickly the problem of rising demands and decreasing supplies of fish and game, we may as well look around for an indoor hobby. There won't be much incentive to go hunting or fishing.

CONTROLLING PARROT'S FEATHER

(Continued from page nine)

yet it has little effect on many others, such as cattail and spadderdock. Dr. Whitford and, also, the fisheries biologists of the Wildlife Resources Commission are continuing to conduct experiments on water weed control. It is hoped that new techniques will be devised to destroy other undesirable plants as effectively and as easily as the one for the control of Parrot's Feather.

THE SMALLMOUTH BLACK BASS



Micropterus dolomieu

With all the traits of an aristocrat, and the usual shortcomings of an unscrupulous roughneck, the smallmouth bass stands head and tail above any strictly fresh water game fish of equal poundage.

The explosive energy in its powerful body and the dash of red in its predatory eye are bad medicine for any nearby food fish; by the same token, this savage instinct to kill its prey with a vicious surge accounts for the heavy impact of its strike.

It prefers only the cleaner, swifter, cooler waters and, in turn, is preferred by discriminating fishermen who like both edibility and capability. Here is a fish of the first water, that will fight to the last ditch.

Although sometimes confused with the largemouth bass, because of the similarity in general characteristics, the smallmouth is generally conceded a superiority in dash, stamina and acrobatics.

Those anglers who know it well respect it highly; those who have not learned to fool this gamester will find the smallmouth a difficult but worthwhile puzzle for solving.

NAMES . . . A member of the sunfish family, the smallmouth is called by many names—some of which are unprintable because they were hastily coined just after this wily rascal had managed to leave some angler's favorite lure unretrievably tangled around a submerged root or snag.

Those of complimentary or other origin are: black bass, green bass, yellow bass, white bass, bronze back, yellow perch, redeye, trout, white trout, black perch, oswego bass, swago bass, chub, welshman, green trout, jumper and tiger bass.

CHARACTERISTICS . . . Although the color of this fish will vary greatly, depending upon water conditions, the basic hue is usually close to a bronze or brassy green. The belly will vary from milky white, to yellow, to a tattle-tale gray.

Darker bronze or dusky markings, appearing as vertical bands or patches, serve as excellent camouflaging. Eyes are usually splashed with red, occasionally white ringed.

Since color cannot be taken as a guide in identifying the smallmouth from the largemouth, here are positive differences: with mouth closed, the jaw hinge, or maxillary bone, at its rearmost extremity will be directly below the eye of the smallmouth. On the largemouth, the maxillary extends beyond the eye.

Also, on the cheek of the largemouth there are 10 oblique rows of scales, where the smallmouth has 17 rows. The largemouth has no scales at the base of the dorsal and anal fins while the smallmouth does have these.

In addition, the dorsal fins are different, since the soft and spinous dorsals of the largemouth are separated by a deep notch, while on the smallmouth the separation is very slight.

SIZE . . . Topping all marks for a world record, the 14 pound lunker, taken on rod and reel by Walter Harden at Oakland, Florida, February 9, 1932, has an excellent chance of standing for all time.

However, this particular bass is believed by many authorities to be a spotted bass (Micropterus punctulatus), a species not officially recognized until after this fish was caught. The spotted bass has some characteristics of the smallmouth and others of the largemouth; it will be accurately covered in a later issue.

While smallmouths up to 9 pounds are taken every year, these are certainly exceptions, for the average throughout the country will vary from 1 to 2 pounds, and in the south slightly higher.

FLAVOR . . . When taken from any swift flowing stream or any deep clear water lake, the flavor of the smallmouth ranks with the best.

FOODS . . . The smallmouth again resembles the largemouth in the choice of foods since it will eat nearly every type of digestible offering. Heading its menu are: minnows, frogs, crawfish, worms, insects, small water snakes, field mice, small birds, baby muskrats, helgrammites, grasshoppers and larvae in general.

LURES . . . Casters will find best results with smaller, more active spoons, underwater plugs, spinners with bucktail or pork rind combinations and noisy surface lures. Fly-fishermen get best results

(Continued on page twenty-two)

Bob White Weathers A Winter

Last Winter Was Mild—But Next Winter May be Rough
Bob White Will Do "All-Right," Given an Even Chance

By R. S. Rainey

Down in Eastern North Carolina where I came from, Uncle Tom, an old ex-slave, used to teach me the language of bird and beast. He would translate their sounds into white folks talk in such a way that it would sound both logical and authentic. At quail-courting season, he used to interpret Bobwhite's song and the answering calls. It made a pretty poem as follows:

"B-ob-wh-i-te!"
"A-ll r-i-ght!"
"Pe-a-s r-i-pe?"
"N-o-t qu-i-te!"
"A-ll r-i-ght,"
"B-ob-wh-i-te."

This winter, I planned a two weeks' quailquest at the home of some in-laws in Orange County, Va. The place where I was to do my hunting was an old plantation called Jordan, located in the foothills of the Blue Ridge. But no sooner had I arrived at Jordan plantation than those gently Southern zephyrs turned into an Arctic blizzard. I awoke on the morning when I was supposed to begin my hunt to a world that stood badly in need of defrosting. The snow was knee-deep on the level and worse than that in the drifts.

I wondered if Bobwhite were as "all right" as he boasted at courting time. It was a matter to give me real worry. I had been busy for the last ten years re-stocking Jordan plantation with quail. The tragic Virginia drought of 1930 had almost destroyed the numerous coveys that inhabited the plantation and I was afraid this albino rain would do what the absence of showers had done half a dozen years before. I had heard the old people tell about the big snow in 1898, during which time many of the birds either froze or starved. These harkers-back to the good old days traced the present scarcity of quail to that famous snow of 1898.

Fortunately in 1930 the locust trees which grow extensively on the mountainside had bloomed and produced their seed pods before the drought began. What few birds survived did so by the grace of this fence-post hardwood. Since that time I had been busy trying, as I said, to replenish the quail on Jordan plantation. Several dozen pairs of quail, obtained from the State game farm, had been turned loose and all hunting had ceased, and I thought the place had been restocked to its predrought plenty. But this snow made me fear lest I should have to do it all over again.

At any rate, in Virginia it's against the law to hunt quail with snow on the ground, and even if it were not against the law, no decent sportsman would take such an unfair advantage of the birds. So here I was in the quail center of the world, the very country from which Bobwhite got his Latin name—*Colinus Virginianus*—with nothing to do but worry about the welfare of the birds under the snow. With my best dog—and my best borrowed dog—chafing and ready to go, I sat me down in the midst of it and wondered what to do to pass the time away.

Suddenly, a big idea came to me. Why not spend the time making a study of just what the birds did in and under the snow?

For the first day after the snow, the quail on Jordan plantation did not move from their roost. I searched thoroughly over all the territory where coveys were known to use. That was Monday after the snow had come on Sunday and Sunday night. Tuesday I did not go out until the afternoon. After lunch, I started for a honeysuckle entanglement down next to the flatwoods.

Now when I say honeysuckle, I am talking about an invader that has given the Virginians more worry to the square inch than the Yankees ever did. My friend, Havilah Babcock, says that Grant took Richmond, but the honeysuckle took the whole darned State. Another difference is that the general gave up what he captured, while those sweet-smelling vines

still hold on. Keep this digression in mind for what is to follow.

In crossing a cornfield on the way to the thicket, I came upon evidences of quail unexpectedly. The snow was still deep, but there was a bare spot to the leeward of each shock where the wind had whipped around. In these thin spots, the birds had been feeding. Now corn is a grain larger than quail like to eat, though they sometimes consume morsels as large as an acorn. These birds were not yet hungry enough to eat the larger grains, contenting themselves with the small kernels at the end of the ears and with small particles fractured by nibbling rodents.

Following the trail, I came near an old rock quarry. With a zoom, an enormous covey flew up in front of me. They were sunning on a ledge entirely bereft of snow and facing south. I noticed where they had walked out on the ice to get some water at the bottom of the quarry.

The birds did not fly far. They lit along a ravine clogged with honeysuckle. Their plump bodies plopped down in the snow and each bird ran along for 10 to 20 yards before it would seek cover. The snow-capped honeysuckle and bushes grew along both sides of the ravine. In searching out where the birds had lit, I found plenty of cozy places under those vines where the quail could keep warm and comfortable.

That night I made my plans for the next day's investigation. I went into the neighboring village and stopped at a filling station. Among the stories told by some local sportsmen who had gathered around the warmth of a wood stove was that of an old-timer who opined that quail burrow under the snow and keep warm after the manner of an Alaskan husky. I was interested in verifying this statement.

The next morning was Wednesday and the third day of the big snow. Now, I knew the location of every covey on Jordan plantation and I also knew that by the third day they would all be out in search of food. I was undecided just where to go to make my observations.

In addition to the covey at the rock quarry, there was the one on the branch where I had found the liquor still the summer before, there was a covey at the spring, one over by the chestnut rail fence, one at the tenant's cabin, another over at the yellow cherry trees, one at the foot of Merry's Mountain, still another at the old sawmill site, one over next to the Oak Hill—and adjoining plantation—and last of all the covey at the family graveyard which the mistress of Jordan chose to call her pets.

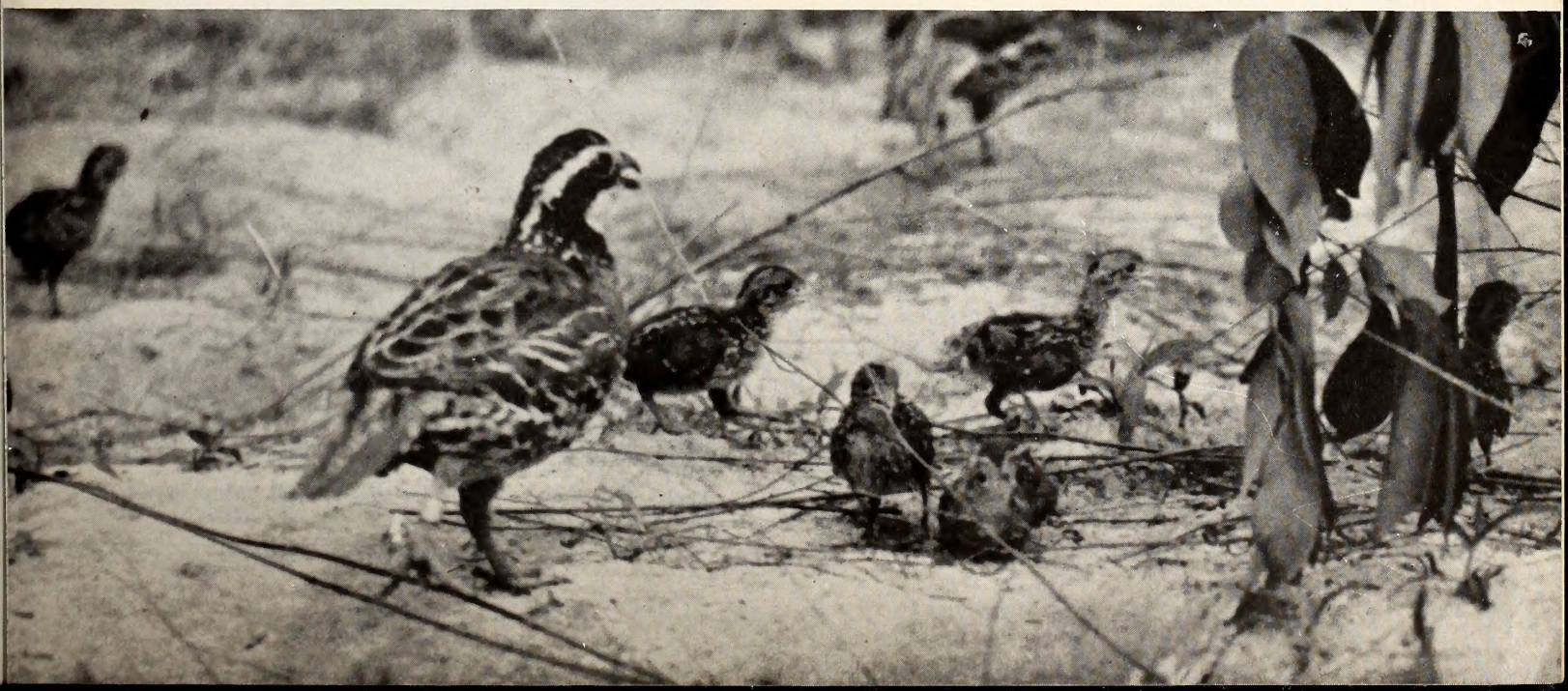
As I said, it's against the law to shoot birds in the snow in Virginia, and is also against all rules of good sportsmanship. However, I took along my gun, intending to shoot at least one bird for scientific study. In a honeysuckle thicket beyond the orchard where two wet-weather streams converge, I heard the peculiar winter call which quail make when feeding. The snow made the visibility good and I could see a large covey feeding on sumac berries. They would bound into the air and hold on like a humming bird on a blossom.

Since I wanted to make sure that no wounded bird was to be left in the snow, and since I wanted to kill only one, I picked out a quail sitting on the bottom strand of a barbed wire fence. When I fired, the covey flew away and I found I had aimed at a cluster of sumac berries in line with a strand of wire!

The birds came down in territory belonging to another plantation, so I did not follow them. However, I investigated the places where they had been feeding, and found for sure that they had been feeding on sumac berries. And though the snow was deep, the birds bounding into the air and falling back with their fat bodies, had packed tight the snow over an area as big as a baseball diamond.

On the opposite side of the plantation is a lespedeza field with an entanglement of low pines, briars and honeysuckle extending along the northern edge. The

Natural propagation of quail depends on how many birds survive the shooting season and winter weather—plus a good nesting season.



southern exposure had thinned out the snow in the edge of the lespedeza patch. For more than 400 yards, the quail had come along under the covering of the thicket. From the edge of this the quail would dart now and then for a taste of lespedeza. I tracked them up to where the entanglement unravels into woodland. Here the birds flew up and I watched where they lit and I went down to pick off a single. They had spread out in an extraordinary wilderness of pines, undergrowth and honeysuckle.

I watched where the birds had come to earth and universally it was the same. They would flop down in the snow with a splatter and rush under the vines and snow, traveling only a few feet. After kicking up several singles, finally one got up to my liking and I fired. The bird was high over the pines and came down in the lespedeza field beyond.

When I climbed the fence into the field, the snow at that point was unbroken by any track, but I saw what looked like one footprint. This was my bird. Only a wing had been broken and that bird had traveled several feet under the snow. It took considerable time to find him.

The next covey was found above the sawmill site at the foot of Merry's Mountain. Again it was the inevitable honeysuckle that furnished the cover. Here was perhaps half an acre of ground littered with pine and oak laps, but entirely covered with honeysuckle. The snow was deep, but the birds had traveled about until it was tramped down like a barnyard.

I hunted this covey for almost two hours in that small space. Here and there were bright-colored stains which at first I was not able to understand. Some stains were green, some pink, some purple, and some blood-red. At last it dawned on me that these stains were from the droppings of the quail. Then I performed an interesting experiment.

I chewed some honeysuckle berries, and on spitting into the snow, it was tinted a bright green. A like experiment with sumac berries gave the stains that looked like blood, and a rich royal purple came from dried wild grapes which I found. I found nothing to give the pretty pink.

Now, on Jordan plantation there are thousands of wildrose bushes, and on them at this season of the year is a thimble-sized red fruit which the darkies down home call "hare apples." Being succulent and tasty, even to the human palate, I had often wondered if "hare apples" would not make good quail food. There are about six seed at the core. In my continued search for that covey at the foot of the mountain, of a sudden I saw a wildrose bush. When chewed up and spat out, the hare apples gave me that pinkish tinge for which I have been looking.

Just as I was about to give up finding this covey, I kicked them up under a pine lap where they had gone to roost. I followed and killed one of the singles.

The place where I found this last covey—an old deed at Jordan showed—had been bought from James Madison, Sr., father of the Father of the Constitution, and quail have thrived on this territory from Colonial times to this! My opinion is that they will prosper there for many long years to come. I examined where this covey got up from under the pine lap. The pine needles on which the birds sat was as free of snow as the carpet in the parlor at the "Big House," though the limbs and honeysuckle overhead was covered with a foot of snow.

Quail know how to pick out dry and comfortable places when it snows. Furthermore, they know where to find food. My observation is that honeysuckle affords the greatest blessing in this respect for the birds. Under its shelter they are able to find refuge from the snow and at the same time remain hidden from winged predators such as hawks and owls. An examination of one of the bird's crop showed that it contained a large number of the honeysuckle berries.

As for the ability of birds to burrow under the snow, let me mention what happened when I shot the second quail. By coincidence, I broke the wing of this bird, also, injuring it in no other way. I saw where it fell on old stump covered with the thrice inevitable honeysuckle. Thinking that the wounded quail had gone under the honeysuckle, I began to pull the vines and search diligently wherever they led. I tore up a space as large as a good sized room, but no sign of my injured Bobwhite.

Finally, I went back to where the bird had first fallen and noticed a little burrow leading off in the opposite direction from the honeysuckle. Following this tiny tunnel, much after the fashion of a puppy tracing a mole hill, I went perhaps 30 yards graveling along until I found the bird. Whether quail burrow

(Continued on page twenty-two)

Quail fare well enough in spring and summer months, but they need plenty of food and cover during the winter.

1948 FISH PRODUCTION

Now that all of the reports are in and all of the fish have been planted in various streams, lakes, and ponds over the state, facts and figures on the North Carolina Wildlife Resources Commission's Production of fish during 1948 may be released.

All in all, 1948 was a successful year in the production of fish despite the fact that one of the most important hatcheries (Marion) underwent a complete renovation, and the Table Rock Hatchery was not in full production until after July 1, 1948.

With both the Table Rock and Marion hatcheries in full swing this year, 1949 production figures should show a considerable increase over last year's work.

Altogether, in 1948, the State's trout and warm water fish hatcheries stocked a total of 917,155 fingerlings, fry, and adult fish, which weighed over nine tons. These figures are based on the number of fish actually released into the waters of the State.

The largest proportion of the fish produced last year were released in public waters, with only a few sold for stocking in privately-owned waters. In numbers of fish, 83 per cent went into public lakes and streams, with 17 per cent filling requests for fish in privately-owned lakes and ponds. Eighty-eight per cent by weight went to public waters, and 12 per cent to private waters.

Fish for private waters are provided only when all requirements for stocking in public waters have been met. The Wildlife Resources Commission charges a fee for fish which go into private waters. Costs are computed according to the size of the fish and the cost of producing them.

TROUT DISTRIBUTED FROM STATE HATCHERIES, 1948

Species	Marion		Roaring Gap		Waynesville		Marmon		Totals	
	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Brook: Sm. Fing.	----	----	----	----	26,940	432	1,500	19	28,440	451
Med. Fing.	----	----	500	44.5	13,000	703	1,600	150	15,100	897.5
Lg. Fing.	5,060	985	5,900	1,298	8,050	1,444	5,200	1,056	24,210	4,783
Adult	----	----	----	----	----	----	300	100	300	100
All	5,060	985	6,400	1,342.5	47,990	2,579	8,600	1,325	68,050	6,231.5
Rainbow: Sm. Fing.	26,000	83	----	----	4,000	114	7,200	96	37,200	293
Med. Fing.	1,900	192	800	60.5	5,800	467	750	70	9,250	789.5
Lg. Fing.	15,100	3,146	3,025	694	11,530	2,585	5,780	917	35,435	7,342
Adult	73	133.5	200	82	142	45	----	----	415	260.5
All	43,073	3,554.5	4,025	836.5	21,472	3,211	13,730	1,083	82,300	8,685
Brown: Sm. Fing.	5,000	4	----	----	----	----	5,100	19	10,100	23
Med. Fing.	----	----	----	----	500	50	350	30	850	80
Lg. Fing.	----	----	----	----	4,775	1,018	560	217	5,335	1,235
Adult	63	112	----	----	----	----	----	----	63	112
All	5,063	116	----	----	5,275	1,068	6,010	266	16,348	1,450
Lake Trout: Sm. Fing.	----	----	----	----	1,512	13.5	----	----	1,512	13.5
TOTALS	53,196	4,655.5	10,425	2,179	76,249	6,871.5	28,340	2,674	168,210	16,380

WARM WATER FISH DISTRIBUTED FROM STATE HATCHERIES, 1948						
Species	Fayetteville		Table Rock		Totals	
	Number	Pounds	Number	Pounds	Number	Pounds
Largemouth Bass: Fry	4,000	Fry	----	----	4,000	Fry
Small Fingerlings	35,875	101	----	----	35,875	101
Medium	25	1	81	2	106	3
Adults	261	282.6	----	----	261	282.6
All	40,161	384.6	81	2	40,242	386.6
Smallmouth Bass: Small Fingerlings	----	----	1,200	11.6	1,200	11.6
Medium Fingerlings	----	----	100	5.8	100	5.8
All	----	----	1,300	17.4	1,300	17.4
Bluegills: Small Fingerlings	594,880	699.6	98,250	102.5	693,130	802.1
Adults	1,649	738.6	24	10.5	1,673	749.1
All	596,529	1,438.2	98,274	113	694,803	1,551.2
Redbreast: Small Fingerlings	2,500	3.5	----	----	2,500	3.5
Rock Bass: Small Fingerlings	----	----	10,100	35.6	10,100	35.6
TOTALS	639,190	1,826.3	109,755	168	748,945	1,994.3

FISH DISTRIBUTION FROM STATE HATCHRIES, 1948								
	PUBLIC WATERS				PRIVATE WATERS			
	Number	Percentage	Weight	Percentage	Number	Percentage	Weight	Percentage
Trout	127,810	76%	14,375	87%	40,400	24%	1,995	13%
Bass	29,386	71%	355.15	88%	12,156	29%	48.85	12%
Sunfish	608,849	86%	1,471.25	92%	98,554	14%	129.05	8%
TOTAL FISH RELEASED	766,045	83%	15,201.4	88%	151,110	17%	2,172.9	12%

Most birds are voracious eaters. Young crows are accustomed to consume at least half their own weight a day and have been known to eat their full weight. A young robin, shortly after leaving its nest, is known to have eaten 14 feet of earthworm in one day.

* * *

The smallest American mammal is the common shrew; the largest mammal in the world is the whale.

The teeth of the rodent group of animals never stop growing during the lifetime of the animal.

* * *

Animals shiver in cold weather because the movement of the muscles allows them to generate more heat for the body.

* * *

Insects have no lungs. They breathe through tubes running through their bodies.

I DON'T BELIEVE IT!!! HOW ABOUT IT??
IS IT TRUE?? HERE IS YOUR CHANCE TO——

GET IT OFF YOUR CHEST!

EDITORIAL COMMENT, LETTERS TO THE EDITOR AND ANECDOTES

Conducted by Win Donat

We have often wondered in the past whether or not this page has been interesting and informative to our readers. Frankly, we don't know the answer, our reader response in the form of questions for discussion has been such as to cause us to doubt that it meets with approval, and yet we know that all hunting, fishing, and conservation questions have not been settled to everyone's satisfaction, nor has the supply of material for discussion on this page been exhausted. This page should be a first class opportunity for the ladies to get in on the wildlife discussion. Yes, and youngsters in school too! The only thing that we ask is that you correspond with us in the form of a question. Please mail it in to the editor of this page. Let's have some fun and information too.

In view of the fact that Mr. J. M. W. of Statesville, N. C., has asked three excellent questions, we are going to attempt to take them as they come:

1. **Is there a law which says that the game protectors can search a car any time they desire?**
2. **In view of the small bag limits on ducks and geese, how can we who go duck hunting for a week and legally send game home in order that we may hunt for the remainder of the week?**
3. **What law prohibits taking a .22 rifle into a duck blind?**

Our answers are as follows:

1. The laws concerning the search of cars by game protectors are not entirely clear as there is no provision for search of a car without warrant where there is a suspicion of a hunting violation. There is such a provision for search of cars without warrant where the protector suspects that the fishing laws have been violated. See Section 113-141 of the North Carolina Public Laws.

2. The federal laws specifically state that one possession limit of ducks and geese may be shipped in any one calendar week, providing that the head and neck plumage and feet are attached. It is evident that any person who personally transports game for others in addition to his own, violates the possession regulation. We suggest that the federal regulations be consulted for the additional requirements concerning the shipment of game.

3. Federal regulations prohibit the killing of migratory waterfowl by use of a rifle and also prohibit any person hunting migratory waterfowl to have more than one gun in possession .

One of our ladies, Mrs. E. B. G. of Raleigh, North Carolina, hints at one of the basic principles of conservation as it applies to the hunter when she asks, "It is true that thinning a covey of quail down to six or eight birds will provide more and stronger birds the next year?"

As long as quail are to be hunted, we should consider the fact that it is vital that we leave enough seed stock to provide an adequate crop for the next year. In the case of quail, however, it is just as important that the number left at the end of the season be large enough to assure survival of the seed stock as these birds depend on each other for warmth as a protection against freezing. It could be said that six or more birds are adequate for these purposes.

Perhaps we can handle this one diplomatically. Mr. W. V. G. of Neuse, North Carolina, wants to know, "Do stray cats and dogs, or do foxes do the most damage to quail?"

There is plenty of evidence that foxes and quail can and do live in the same areas. It is also a known fact that these species live together when there are no other elements which would upset the balance established by nature. Therefore, it is conceivable that when there is too much hunting, or a wholesale introduction of foxes, or numerous self-hunting dogs and stray cats, all which can affect the quail population, then any one of these factors can be considered as detrimental to the quail population. Of

course, the answer to the specific question lies in the accurate survey of all the factors and conditions in any given area.

Mr. J. L. L., Jr., of Raleigh, North Carolina, says that he hasn't seen a fish in the water for some time and wonders if "fish actually have the ability to change their color to match their background?"

Some fish, such as the flounder in salt water, have the curious ability to change their general coloration rather quickly to blend with their background. The same is true to some extent regarding the inland fish. Bass from different environments are of different shades varying from light to dark. However, these changes in the color of inland fish do not occur over a short period of time, but usually after an exposure to the new environment of several days or weeks.

An old favorite crops up again. Mr. L. D. W., Jr., of Holly Springs, North Carolina, asks, "It there a snake which comes apart when in danger and then recouples its parts after danger has passed?"

This erroneous belief seems to persist about a snake, but the creature involved is a small lizard, perhaps better known as the glass snake. Most lizards are able to disjoint the tail sections of their bodies either voluntarily or when caught. The separated tail wiggles for a while, thereby distracting the pursuer's attention and allowing the lizard to escape. Once disjointed, the two parts cannot be rejoined although a new but shorter and incomplete tail does grow in place of the original one.

Mr. P. A. S. of Raleigh, North Carolina, wants us to give him a definition of "jigger fishing" as he has been unable to get it clearly defined.

According to the definition contained in the 1949 *Official Abstract of Laws and Regulations Governing Fresh-Water Fishing*, published by the Wildlife Resources Commission, jigger fishing is defined as follows: "Jiggering is fishing from any kind of floating device with any type of lure or bait attached to a line under two feet in length fastened on a rod or pole." This method of fishing is unlawful in North Carolina.

SMALLMOUTH BLACK BASS

(Continued from page fifteen)

with wet and dry flies, fly and spinner combinations, bulky hair lures and plastic or wood imitations of minnows, frogs, etc.

RANGE . . . The original native habitat of the smallmouth was from northern Georgia and Alabama to southern Canada, and from the eastern seaboard west to Manitoba. Now, thanks to extensive transplanting, this bold battler delights anglers in nearly every state in the Union and many parts of Canada.

In North Carolina the smallmouth is a species of the foothills. It is native to the streams from the New River to the Hiwassee, and has been introduced into the upper stretches of the Yadkin, the Catawba, the Broad, and into streams, ponds and reservoirs elsewhere in the State from stock produced in fish hatcheries.

When seeking a scrap with a smallmouth, pass up the sluggish, unattractive waters and try your luck in the faster moving streams where the clear waters rush over rocky or sandy bottoms and swirl around such cover as undercut banks, boulders or logs. Deep, clear pools and the foot of riffles are excellent feeding places. In lakes, better luck will be had along rocky shore lines, sandy or pebbly stretches or gravel bars running out into the depths.

BOB WHITE WEATHERS A WINTER

(Continued from page eighteen)

under the snow for the sake of keeping warm, I do not know, but that they do dig in to escape their enemies is a fact proved by my own experience.

This snow came on top of another snow that had been on the ground for a week, and yet the two quail that I killed were undoubtedly the fattest I ever saw. The contents of one bird's crop weighed one-fourth ounce. The little sac was stuffed to capacity. The one shot at the lespedeza patch had 1,685 of that legume's seed in its craw—I counted them! One quail weighed eight ounces and the other seven and a half.

What about Bobwhite under the snow? Like his cheery song at mating time, I think he's "A-LL R-I-GHT!!"

When the West was settled, pioneers found a prairie dog town covering an area 250 miles long and 100 miles wide containing some 400,000,000 individuals.

"What a mathematician! He can decimate faster than we can multiply!"

ON THEIR WAY NORTH—Thousands of Canada Geese which have spent the winter months in North Carolina's lakes and marshes are now on their way back to their nesting grounds in Canada. They follow the eastern coast for some distance, then cut cross-country into the Canadian provinces, and nest as far north as the Arctic Circle.

Tarheel fishermen can profit by acquiring a very worthwhile booklet entitled "Important Food and Game Fishes of North Carolina" by Dr. Willis King, Chief of the Wildlife Resources Commission's Fish Division. The publication contains over fifty pages of useful illustrations and information on favorite food and game species. A charge of 25c is made to cover mailing costs and part of the cost of publication. Order your copy today by sending 25c to the N. C. Wildlife Resources Commission, Box 2919, Raleigh.

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BUFFER SPECIES are IMPORTANT TOO

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